



# California Regional Water Quality Control Board

## San Diego Region



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Protection

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May 9, 2001

Dr. Daniel Schlenk  
University of California - Department of Environmental Sciences, Room 2268 Geology  
900 University Avenue  
Riverside, CA 92521

**SUBJECT: REQUEST TO INITIATE SCIENTIFIC PEER REVIEW PROCESS FOR  
CHOLLAS CREEK TOTAL MAXIMUM DAILY LOAD (TMDL) FOR DIAZINON**

Dear Dr. Schlenk:

I understand that you have agreed to perform the scientific peer review of the Chollas Creek TMDL for Diazinon per the April 27, 2001 memo from Dr. Gerald W. Bowes of the State Water Resources Control Board, Division of Water Quality to me. The San Diego Regional Water Quality Control Board (Regional Board) is requesting to begin the process of scientific peer review for the Chollas Creek Diazinon "technical TMDL". We would like to obtain peer review comments on the "technical TMDL" in 30 days (June 11, 2001).

Attached are:

1. A brief summary of the Chollas Creek diazinon TMDL;
2. A summary of scientific issues;
3. A list of scientists and engineers involved in studies of the Chollas Creek diazinon TMDL; and a list of scientists and engineers involved in development of the Chollas Creek diazinon TMDL; and
4. The technical TMDL for which peer review is requested. This portion of the TMDL does not contain an implementation plan (hence the label "technical TMDL").

Please contact Linda Pardy of Regional Board staff if you have any questions or need further information. You may reach her at (858) 627-3932 or email at [<pardl@rb9.swrcb.ca.gov>](mailto:pardl@rb9.swrcb.ca.gov).

Respectfully,

JOHN H. ROBERTUS  
Executive Officer  
San Diego Regional Water Quality Control Board

Attachments (4)

### ***California Environmental Protection Agency***

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Web-site at <http://www.swrcb.ca.gov>.*

Recycled Paper



## Attachment 1

### Background of the Chollas Creek Diazinon TMDL

Chollas Creek is an urban creek with highly variable flows. The highest flow rates are associated with storm events. During dry weather, there are often extended periods of no surface flows in the creek, although pools of standing water may be present. Much of the creek has been channelized and concrete lined, but some sections of earthen creek bed remain. The mouth of the creek is located on the eastern shoreline of the central portion of San Diego Bay.

The watershed of Chollas Creek encompasses 16,273 acres. The area of the north fork of the watershed (9,276 acres) is somewhat larger than that of the south fork (6,997 acres).

Land use is predominantly residential, with some commercial and industrial use. A significant portion of the watershed consists of roadways. The remaining land in the watershed is open space. Portions of the cities of San Diego, Lemon Grove, and La Mesa are located within the watershed. A small portion of the watershed consists of “tidelands” immediately adjacent to San Diego Bay. Some of this tideland area is under the jurisdiction of the San Diego Unified Port District; the remainder is under the jurisdiction of the United States Navy.

Since 1994, Chollas Creek storm water flows have been found to be toxic in almost all toxicity tests performed using the water flea, *Ceriodaphnia dubia*. Consequently, Chollas Creek has not met the applicable water quality objective for toxicity. Toxicity testing is an accepted method for assessment of the potential impact of complex mixtures of pollutants (such as urban storm water runoff) on aquatic life in receiving waters. The water flea *Ceriodaphnia dubia* is an approved test organism for examination of freshwater samples. The repeated toxicity of Chollas Creek storm water to the water flea *Ceriodaphnia dubia* indicates likely adverse affects to aquatic organisms, which means that “warm freshwater habitat” and “wildlife habitat,” two of the beneficial uses of Chollas Creek, have not been protected.

A Toxicity Identification Evaluation (TIE) has been conducted to determine the cause of the toxicity in Chollas Creek storm water. Results from the TIE indicate that the insecticide diazinon has caused the toxicity to the water flea *Ceriodaphnia dubia*. Diazinon was found in concentrations from 0.32 µg/l to 0.54 µg/l.

## Attachment 2

### Summary of Scientific Issues:

The “scientific issues” are the foundations of a rule that are premised upon, or derived from, empirical data or other scientific findings, conclusions, or assumptions establishing a regulatory level, standard, or other requirement for the protection of public health or the environment. The scientific issues are as follows:

1. The effects of diazinon dissolved in the water column on the beneficial uses (i.e., aquatic life and wildlife) of Chollas Creek. This would include health, reproduction, survivability and diversity.
2. The selection of the numeric target for diazinon.
3. Toxicity test protocols.
4. The assimilative capacity for diazinon in the water of Chollas Creek, given its physical, hydrological and chemical characteristics, which will be protective of the beneficial uses and attain the numeric targets specified by the Regional Board.

The peer review should focus on the adequacy and validity of the technical analysis and the interpretation of the data as expressed by the TMDL produced by Regional Board staff.

## Attachment 3

### Scientists and Engineers Involved in Previous Studies of Chollas Creek Diazinon TMDL

- Nan Singhasemanon, Associate Environmental Research Scientist, Environmental Monitoring and Pest Management, Department of Pesticide Regulation
- Nancy Gardiner, Project Manager, San Diego Municipal Stormwater Monitoring Report, URS Greiner Woodward Clyde
- Steven Bay, Toxicologist, Southern California Coastal Water Research Project
- Ken Schiff, Principal Scientist, Southern California Coastal Water Research Project

### Scientists and Engineers Involved in Development of Chollas Creek Diazinon TMDL

- Bruce Posthumus, Senior Water Resources Control Engineer, San Diego RWQCB staff
- Linda Pardy, Environmental Specialist, San Diego RWQCB staff
- Kyle Olewnik, Water Resources Control Engineer, San Diego RWQCB staff
- Kristin Schwall, Water Resources Control Engineer, San Diego RWQCB staff
- Joan Brackin, Water Resources Control Engineer, San Diego RWQCB staff